

### **Abstract**

An auto-enrichener for an all terrain vehicle, including an enriching conduit for carrying fuel and air to an engine, and a valve disposed in the conduit. The valve is adjustable between at least an open configuration and a closed configuration. In  
5 the open configuration passage of fuel and air through the conduit is enabled, and in the closed configuration passage of fuel and air through the conduit is not enabled. The auto-enrichener also includes a thermal expansion element in communication with the valve. The thermal expansion element expands with increasing temperature and contracts with decreasing temperature. The thermal expansion element actuates the valve such that  
10 when the thermal expansion element is at a first temperature the valve is in the open configuration, and when the thermal expansion element is at a second temperature greater than the first temperature the valve is in the closed configuration. The auto-enrichener also includes a heater in thermal communication with the thermal expansion element. The heater is operated when the engine is operated, so that the thermal expansion element  
15 is heated when the engine is operated. Consequently, the amount of additional air and fuel provided for enriching the engine corresponds to the temperature of the thermal expansion element, and also corresponds to the temperature of the engine.